

VERSION DESCRIPTION DOCUMENT FOR THE NASA EQUIPMENT MANAGEMENT SYSTEM (NEMS)

Release 5.0.1

NASA-NEMS-VDD-13

PrISMS Contract

March 29, 2002



National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Huntsville, AL 35812

**VERSION DESCRIPTION DOCUMENT FOR THE
NASA EQUIPMENT MANAGEMENT SYSTEM (NEMS)
RELEASE 5.0.1**

Submitted by

| | |
|----------------------|------|
| Neal Cantrell | Date |
| Functional Area Lead | |

Reviewed by
CSC

Lindon Gargis
Agencywide IRM, Property
and Procurement Systems

Date

Jim Cofer
Configuration Management

Date

Hector Garcia
Agencywide IRM

Date

Richard Bishop
DBA

Date

Prepared by

Computer Sciences Corporation, Contract NAS8-60000

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
HUNTSVILLE, ALABAMA

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Approved by

| | |
|---|------|
| Sheila Fogle Consolidation Center Project Manager | Date |
|---|------|

| | |
|---|------|
| Nikita Zurkin Program Functional Manager | Date |
|---|------|

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
HUNTSVILLE, ALABAMA

March 29, 2002

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1. INTRODUCTION

This Version Description Document (VDD) describes the changes and installation procedures for this release of the NASA Equipment Management System (NEMS). This section identifies the release, describes its purpose, defines its scope, and identifies its contact points.

1.1 IDENTIFICATION OF THE RELEASE

This software release is identified as NEMS, Release 5.0.1 and has an effective release date of March 29, 2002.

1.2 PURPOSE OF THE RELEASE

This release implements modifications for the following Change Control Requests (CCRs):

| <u>CCR</u> | <u>Title</u> |
|------------|--|
| 317 | Standardized Manufacturer's Code Table |

This release implements modifications necessitated by the following Discrepancy Reports (DRs):

| <u>CCR</u> | <u>Title</u> |
|------------|--------------|
| None | |

1.3 SCOPE

This VDD provides the functional and technical user of NEMS with information regarding the content, status, and structure of Release 5.0.1, including the following:

- Changes implemented since Release 5.0;
- Validation procedures to ensure the reliability of release changes;
- References to other documentation affected by this release;
- Detailed software installation instructions.

No waivers are associated with this release.

1.4 CONTACT POINTS

Sustaining Engineering for NEMS is provided through the Consolidation Center (CC) located at Marshall Space Flight Center (MSFC). Questions regarding the functional and/or the technical aspects as well as the installation of this release should be directed to:

The NACC Technical Services Center (Use following Key Words: SESAAS & NEMS)

Telephone: (256) 544-6673
Email: neal.cantrell@msfc.nasa.gov
FAX: (256) 544-1836

2. FUNCTIONAL INFORMATION

This section includes details regarding functional changes, functional interfaces, critical issues, affected documents, and application system administration.

2.1 FUNCTIONAL CHANGES

Please refer to Appendix C, Functional Change Validation Procedures, for a description of all functional changes related to this release. Appendix D, Installation Instructions, describes all Software PREDICT changes related to this release.

2.2 FUNCTIONAL INTERFACES

This section is not applicable for this release.

2.3 CRITICAL ISSUES

This section is not applicable for this release.

2.4 AFFECTED DOCUMENTS

This section is not applicable for this release.

2.5 APPLICATION SYSTEM ADMINISTRATION

There are no application system administration changes associated with this release.

3. TECHNICAL INFORMATION

This section includes details regarding technical system interfaces, data dictionary changes, software object changes, and database administration activities.

3.1 TECHNICAL SYSTEM INTERFACES

This section is not applicable with this release.

3.2 DATA DICTIONARY CHANGES

Refer to Appendix D, Section 4.0, for the data dictionary changes in this release.

3.3 SOFTWARE OBJECT CHANGES

Modules affected by this release are included in Appendix D, Section 2.2.

3.4 DATABASE ADMINISTRATION

This section describes the database administration activities for installation of this release.

3.4.1 Release Dataset Names

Refer to Appendix D, Introduction section, for the release dataset names.

3.4.2 Inventory of Objects

Refer to Appendix D, Section 2.1, for an inventory of Natural object types.

3.4.3 Storage Considerations

The changes represented by this release should not affect storage requirements.

3.4.4 Installation Procedures

Refer to Appendix D, Installation Instructions for NEMS Software Release 5.0.1 for detailed software installation procedures.

3.5 OPERATIONAL PREPARATION

Refer to the procedure described in Appendix D for assistance in preparing for proper installation and operational use of this release.

4. KNOWN AND OPEN PROBLEMS

There are no known or open problems related to this release.

APPENDIX A - ABBREVIATIONS AND ACRONYMS

| | |
|--------|--|
| CC | Consolidation Center |
| CCR | Change Control Request |
| CSC | Computer Sciences Corporation |
| DBA | Database Administrator |
| DR | Discrepancy Report |
| FAX | Electronic Facsimile Transmission |
| IRM | Information Resources Management |
| JCL | Job Control Language |
| MSFC | Marshall Space Flight Center |
| NACC | NASA Automated Data Processing (ADP) Consolidation Center |
| NASA | National Aeronautics and Space Administration |
| NEMS | NASA Equipment Management System |
| NPDMS | NASA Property Disposal Management System |
| SESAAS | Sustaining Engineering Support for Agencywide Administrative Systems |
| VDD | Version Description Document |

APPENDIX B - GLOSSARY

Database Administration

Responsibility for maintaining the physical database environment.

Implementation

The process by which a NASA site installs a NASA software release and places it into operational use.

Operational Preparation

Preparation by a NASA site for installation and use of a NASA application release.

System Administration

Responsibility for administrative functions such as application security and table data maintenance associated with a NASA application.

APPENDIX C - FUNCTIONAL CHANGE VALIDATION PROCEDURES

Index of validation procedures for changes in this release:

| Section | CCR | Title |
|---------|-----|-------|
|---------|-----|-------|

| | | |
|-----|-----|--|
| 1.0 | 317 | Standardized Manufacturer's Code Table |
|-----|-----|--|

Details for the validation procedures follow:

1.0 CCR 317 – Standardized Manufacturer’s Code Table.

The Manufacturer’s Code Table (040) is not the same for all centers. Analyze the Manufacturer’s Code Table for each center and determine the values (name and address) that should be correct for all centers.

Description of Change

Table 040 was changed for each center to reflect a standard manufacturer’s code table.

Functional Impact

There is no functional impact as a result of this CCR.

Validation Procedures

None

| <u>MODULE ID</u> | <u>MODULE NAME</u> | <u>TYPE</u> |
|------------------|--|-------------|
| <u>NEMS</u> | | |
| NEUMFGPA | Unload Table 040 (Manufacturer’s Code Table) | Program |
| NEUMFGPB | Update Table 040 (Manufacturer’s Code Table) | Program |

APPENDIX D - INSTALLATION INSTRUCTIONS AND CHECKLIST FOR NEMS SOFTWARE RELEASE 5.0.1

Introduction

Release information:

System Name: NEMS
Release Number: 5.0.1
Release Date: March 29, 2002
Effective Date: Immediately

In case of installation problems, contact the NASA Automated Data Processing (ADP) Consolidation Center (NACC) Technical Services Center (Use following Key Words: SESAAS & NEMS)

Telephone: (256) 544-6673
Email: neal.cantrell@msfc.nasa.gov
FAX: (256) 544-1836

The following datasets are located on the transient storage DASD volumes under the following data sets names:

xxMOV.NEMS.PROD.R501.R0302.SRC
xxMOV.NEMS.PROD.R501.R0302.TBL

Where "xx" is replaced by the appropriate NASA Center designation.

AR - ARC
DF - DFRC
GS - GSFC
HQ - HQ
J5 - JSC
KS - KSC
LA - LaRC
LE - GRC (Glenn)
MS - MSFC
SS - SSC

Installation Sequence

The sequence in which the installation of this release should occur is provided in the following list. A checklist is provided in section 9.0 to assist in tracking the installation of this release.

- 1.0 Back Up Existing Data
- 2.0 Copy Source
- 3.0 Pre-Predict Data Conversion
- 4.0 Install Predict
- 5.0 Catalog Source Code
- 6.0 Post-Predict Data Conversion
- 7.0 Perform Release-Specific Procedures
- 8.0 Local JCL Mods
- 9.0 Installation Checklist

1.0 Back Up Existing Data

It is advisable to back up all NEMS files as a precautionary measure prior to installation.

2.0 Copy Source

2.1 Copy Source Code

A. Source code is installed in three separate libraries. Source code for programs modified in this release version were unloaded in the NATUNLD format, these programs all have specific destination libraries as shown below. All the NEMS programs have a destination of NEMS; NEMSINV programs have a destination of NEMSINV and NEMSPCM programs have a destination of NEMSPCM.

1. Load the NEMS source library from the dataset xxMOV.NEMS.PROD.R501.R0302.SRC.

The source programs were unloaded using the Natural utility NATUNLD. The NEMS programs:

1. NEUMFGPA Unload Table 040 (Manufacturer's Code Table)
2. NEUMFGPB Update Table 040 (Manufacturer's Code Table)

will be loaded to the application library NEMS, replacing any existing programs of the same name.

2. Load the NEMSINV source library from the dataset: Not Applicable

The source programs were unloaded using the Natural utility NATUNLD. The NEMSINV programs:

1. None

will be loaded to the application library NEMSINV, replacing any existing programs of the same name.

3. Load NEMSPCM source library from the dataset: Not Applicable.

The source programs were unloaded using the Natural utility NATUNLD. The NEMSPCM Programs:

1. None

will be loaded to the application library NEMSPCM, replacing any existing programs of the same name.

The source module counts included in this release are listed below:

| Natural Source Modules by Type | Count |
|--------------------------------|-------|
| GLOBAL DATA AREA | 0 |
| LOCAL/PARAM DATA AREA | 0 |
| MAPS | 0 |
| HELP ROUTINES | 0 |
| SUBROUTINES | 0 |
| SUBPROGRAMS | 0 |
| PROGRAMS | 2 |
| COPYCODE | 0 |
| TEXT | 0 |
| PROCESS | 0 |
| MISCELLANEOUS OBJECTS | 0 |
| Total: | 2 |

2.2 List of Source Code Modifications

The following are the modules added, modified, and deleted.

Added Modules:

1. NEUMFGPA Program
2. NEUMFGPB Program

Modified Modules:

1. None

Deleted Modules:

1. None

3.0 Pre-Predict Data Conversion

Not applicable with this release.

4.0 Install Predict

Not applicable with this release.

5.0 Catalog Source Code

The following modules should be changed before the CATALOG is run. Modules NEMS, INV000P0, and MNUC00P1 need to be modified at each center to contain the correct contact name and phone number for each center. Replace the ?? in MSD008P1 and MSD008P5 with your installation number.

Run a batch job to catalog (CATALL) all modules in the NEMS library using the NASA Batch Standard Parameters replacing the existing PS and LS with the following values: PS=23 and LS=80. It is not necessary to catalog the Global Data Area (GDA).

You should receive 38 NATURAL 0303 errors for modules that begin with RPT* that concern page overflow and 32 programs will produce NATURAL 0002 errors. Program MSC005P1 will not compile. There should be a total of 71 NATURAL errors.

A list of errors found above and dispositions of these results follows:

- To compile the NATURAL 0303 errors correctly, run another CATALOG for the RPT* modules in the NEMS library using the NASA Batch Standard Parameters. You should receive 12 NATURAL 0002 errors. Ignore the 0002 errors because these objects are dynamic.
- The 32 NATURAL 0002 errors from the first CATALOG are to be IGNORED because these objects are dynamic.
- MSX001P1 will only compile for centers that use the NEMS-PRIOR-MONTH file.
- IGNORE any errors for program MSC005P1.

Run a batch job to catalog (CATALL) all modules in the NEMSINV library using the NASA Batch Standard Parameters. It is not necessary to catalog the Global Data Area (GDA). There should be no errors received.

Run an online catalog (CATALL) on module TRNI34P1 and TRNILOP3 to prevent problems with access to the second screen.

Run a batch job to catalog (CATALL) all modules in the NEMSPCM library using the NASA Batch Standard Parameters. It is not necessary to catalog the Global Data Area (GDA). There should be one NATURAL 0043 error received. See Section 9.0 Installation Checklist for instructions on how to correct these errors.

After all objects are compiled, the NEMS application will run under the NASA On-line Standard Parameters.

6.0 Post-Predict Data Conversion

Not applicable with this release.

7.0 Perform Release-Specific Procedures

7.1 Run NEUMFGPB (Manufacturer's Code Table Update)

(Note: This is not a regular NEMS report and must be executed outside of the NEMS nightly cycle.)

Each NASA center should execute (in batch mode) the program NEUMFGPB to update the NEMS Table File 040 (Manufacturer's Code Table) using the JCL and work file furnished. See sample JCL below.

```
000001 //IRNEMSD JOB (AGAOHNEMS002,4485),'TABL 040',CLASS=D,
000002 //      NOTIFY=XXXXX,MSGCLASS=A
000003 //*****
000004 //* UPDATE NEMS TABLE 040 USING WRK FILE 1
000005 //*****
000006 //DVNPDM EXEC N01Z
000007 //CMPRINT DD SYSOUT=(A,L1SSTD1C)
000008 //CMWKF01 DD DSN=xxMOV.NEMS.PROD.R0501.R0302.TBL,
000009 //      DISP=(OLD,KEEP,KEEP)
000010 //CMSYNIN DD *
000011 XXXXXX,XXXXX
000012 %*
000013 XXXXX
000014 NEUMFGPB PARM1 PARM2
000015 FIN
000016 /*
000017 //
```

The following changes will need to be made to the above JCL before submitting the batch job:

Line number 000002 – change X's to your USERID.

Line number 000008 – change X's to the work file name (this will be different for each center).

Line number 000011 – change X's to your LIBRARY NAME, USERID.

Line number 000013 – change X's to your PASSWORD.

Line number 000014 – change PARM1 and PARM2 to desired parameters as described below in this document.

NEUMFGPB uses as input the NEMS Table File 040 and a work file of Manufacturer Codes (MFG-CODE), Manufacturer Name (MFG-NAME) and Manufacturer Address (MFG-ADDR) to update the NEMS Table File 040.

Parameters are used in the JCL to allow the user to run in display or update mode. Display mode will create a report of MFG-CODEs and their associated data elements that have been identified as status new (to be added) or update (to be updated). Update mode will create a report of MFG-CODEs and their associated data elements that have a status of new or update and have either been added to or updated the NEMS Table File 040. A second parameter allows the user to select a full or partial report. A full report will create a list of all MFG-CODEs and associated data elements processed that cycle. A partial report will create a list of only those MFG-CODEs and associated data elements that change (update) a record on the NEMS Table File 040.

The parameters that may be used are:

PARM1: DISPLA or UPDATE

DISPLA - this produces a report of MFG-CODEs with their associated old and new MFG-NAME, old and new MFG-ADDRS, status and equipment/ history counts. No update of NEMS Table 040 takes place when using this parameter set.

UPDATE - this produces a report of MFG-CODEs with their associated old and new MFG-NAME, old and new MFG-ADDRS, status and equipment/ history counts. The NEMS Table 040 is updated when using this parameter set.

PARM2: PART or FULL

FULL - this produces a full report of MFG-CODEs with their associated old and new MFG-NAME, old and new MFG-ADDRS, status and equipment/history counts.

PART - this produces a partial report of MFG-CODEs with their associated old and new MFG-NAME, old and new MFG-ADDRS, status and equipment/history counts.

It is suggested that the user run the batch job using the DISPLA FULL parameter set first, print the report and verify the adds/updates to be made. After verification has been completed, the user should run the batch job again. Depending on the type of report desired, the user should use either the UPDATE FULL or the UPDATE PART parameter set to update the NEMS Table 040.

Below is a sample of the report header that will be generated when program NEUMFGPB is complete using the parameter set DISPLA FULL. The second line of the header varies depending on the parameter set used. Other variations are: UPDATE CYCLE – FULL LIST, UPDATE CYCLE – PARTIAL LIST and DISPLAY CYCLE – PARTIAL LIST.

| | | | | |
|----------|--------|--------------|-----------------|------------------------|
| | | OLD MFG NAME | OLD MFG ADDRESS | EQUIPMENT RECORD COUNT |
| MFG-CODE | STATUS | NEW MFG NAME | NEW MFG ADDRESS | HISTORY RECORD COUNT |
| ***** | | | | |

The following are the data elements listed in the report:

MFG CODE – Manufacturer’s Code, from Work File.

STATUS – Status of record (New or Update).

OLD MFG NAME – Old Manufacturer’s Name, from Table 040.

NEW MFG NAME – New Manufacturer’s Name, from Work File.

OLD MFG ADDRESS – Old Manufacturer’s Address, from Table 040.

NEW MFG ADDRESS – New Manufacturer’s Address, from Work file.

EQUIPMENT RECORD COUNT – Equipment File Record Count (count of records on Equipment file affected by change).

HISTORY RECORD COUNT – History File Record Count (count of records on History file affected by change).

8.0 Local JCL Mods

Other JCL changes may be necessary due to differences in each center’s JCL. Changes are in **bold**:

None

9.0 Installation Checklist

1.0 Back Up Existing Data

2.0 Copy Source

2.1 Copy Source Code

2.2 List of Source Code Modifications

3.0 Pre-Predict Data Conversion

5.0 Catalog Source Code

Update the Password to the NEMS-PCM-AUTH file in PCM programs: MNUC00P1; MNUC01P1; RPTSUBP1; TRNC00P1; TRNC26P1; TRNC52P1; TRNUPDP1. This step is optional if the Center chooses not to put a password on the NEMS-PCM-AUTH file.

A. Find out from your DBA the ADABAS Security password assigned to the NEMS-PCM-AUTH file at your installation.

B. Logon to the NEMSPCM and use the Scan utility to search the NEMSPCM programs listed above for the word:

PASSWORD = ‘NEMSPCM’ and replace it with:

PASSWORD = 'Your site Password'. This scan and replace will change all references to the password with your installation's password.

6.0 Post-Predict Data Conversion

7.0 Perform Release-Specific Procedures

7.1 Run NEUMFGPB (Manufacturer's Code Table Update)

8.0 Local JCL Mods